

REMARKS/ARGUMENTS

Status of the Claims

Claims 1-15 are pending in the subject application with claims 1 and 12 being the only independent claims. Independent claim 1 has been amended to incorporate features described in paragraphs [0013] and [0040] in the published version of the present specification and Figs. 2a and 2b (US 2007/0289795). Additional amendments have been made to the claims to conform to U.S. patent practice without narrowing the claim or any claim element contained therein. New claims 12-15 have been added and are supported by original claim 1 and paragraphs [0033] and [0034] of the published specification. No new matter has been added.

Overview of the Office Action

Claims 1 and 5-8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by EP0 818372 ("EP '372").

Claims 2-4 and 9-11 have been rejected under 35 U.S.C. § 103(a) as unpatentable over EP '372 in view of US 7,320,246 (Schick).

Patentability of the Invention

Independent Claim 1

Independent claim 1 recites a method for controlling the slip of a pneumatic tire of an automobile "for optimizing the grip of the pneumatic tire" and comprises the features "adjusting said slip to bring the surface temperature (T_2) towards an optimal temperature." The above recited features are not taught by or suggested in EP '372 because:

(i) EP '372 teaches bringing the wheel slip to a fixed predetermined value, rather than adjusting the slip to bring the surface temperature (T_2) of the tread in the contact area towards an optimal temperature as recited in independent claim 1; and

(ii) EP '372 teaches setting a slip for a railway vehicle wheel to a given level for maximized force transmission, rather than optimizing the grip of the pneumatic tire as recited in independent claim 1.

EP '372 does not teach or suggest "adjusting said slip to bring the surface temperature (T_2) [of the tread in the contact area] towards an optimal temperature" as recited in independent claim 1. In contrast, EP '372 teaches a method for regulating slip for train wheels. More specifically, EP '372 teaches, in the context of railway vehicles, the general concept of setting slip to a specific level for maximized force transmission (see, also, background of invention described in para. [0002] of applicants' published specification). At the same time, a limiter 1 monitors at least one variable and limits the control of the wheel slip if the monitored variable exceeds a threshold. One of the monitored variables is the wheel surface temperature. Thus, EP '372 does not bring the surface temperature toward an optimal temperature. Instead, EP '372 merely ensures that the surface temperature does not exceed a threshold value while controlling the slip.

Since EP '372 discloses that the wheel slip is controlled to a fixed value, EP '372 fails to teach or suggest "adjusting said slip to bring the surface temperature (T_2) towards an optimal temperature," as recited in independent claim 1. Therefore, independent claim 1 is neither taught by nor obvious over EP '372 for at least the above reasons.

With respect to the second reason, the inventors of the present application recognized that the available grip of a pneumatic wheel changes based on actively changing conditions, such as the surface temperature (T_2) of the tread in the contact area. Thus, the present application implements controls to optimize the available grip based on the changing conditions that change the grip.

As discussed above, EP '372 teaches a method for regulating slip for train wheels by setting slip to a specific level for maximized force transmission (see, also, background of invention described in para. [0002] of applicants' published specification). EP '372 also discloses avoiding unacceptably high temperatures or strain for metallic wheels and rails to avoid their destruction or rapid wear (see, e.g., the paragraph bridging pages 1-2 of the attached computer translation of EP '372).

However, there is no teaching in EP '372 concerning optimizing the grip of the pneumatic tire as recited in independent claim 1. EP '372 merely teaches setting wheel slip to a given level for maximized force transmission. As applicants stated in the subject application, attempting to use as much as possible from the available grip, as taught by EP '372, differs from optimizing the tire grip as recited in independent claim 1 (see paras. [0012]-[0013] of applicants' published specification). Thus, since EP '372 teaches only that the slip is adjusted for maximized use of available grip, EP '372 does not teach or suggest "optimizing the grip of the pneumatic tire," as recited in independent claim 1. Therefore, independent claim 1 is neither taught by nor obvious over EP '372 for the above additional reasons.

Furthermore, because EP '372 teaches controlling slip of a train wheel, one skilled in the art will not look to EP '372 for teachings when contemplating the claimed method of controlling slip of a pneumatic tire. Therefore, independent claim 1 is not obvious over EP '372 for the above additional reasons.

In view of all the above reasons, applicants request that the claim rejection of independent claim 1 be withdrawn.

New Independent Claim 12

Similar to independent claim 1, new independent claim 12 recites a method for "optimizing the grip of a pneumatic tire comprising a tread," and "adjusting the slip of the

pneumatic tire to bring the surface temperature (T_2) towards an optimal temperature with respect to the grip of the pneumatic tire, thereby optimizing the grip of the pneumatic tire.”

Accordingly, independent claim 12 is allowable for at least the same reasons that independent claim 1 is allowable.

Dependent Claims 2-11 and 13-15

Claims 2-11 and 13-15 each depend, directly or indirectly, from allowable independent claim 1 or 12 and are thus allowable therewith.

In addition, claims 2-11 and 13-15 include features which serve to even more clearly distinguish the claimed invention over the applied prior art.

Conclusion

Based on all of the above, the present application is now in proper condition for allowance. Prompt and favorable action to this effect and early passing of this application to issue are respectfully solicited. Should the Examiner have any comments, questions, suggestions or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate reaching a resolution of any outstanding issues.

No fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our PTO Deposit Account No. 03-2412.

Respectfully submitted,
COHEN PONTANI LIEBERMAN & PAVANE LLP

By /Alfred W. Froebrich/
Alfred W. Froebrich
Reg. No. 38,887
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

Dated: December 28, 2009